

CLAIMS

What is claimed is:

1. A multi-imager camera operable under extremes of illuminations from high ambient lighting conditions to low ambient lighting conditions without the need for multiple optical paths, comprising:
 - a. a single primary lens system for directing a beam;
 - b. a beam-splitting mirror adapted for receiving and distributing the beam directed by the single lens;
 - c. the beam-splitting mirror including a dual-path diverting capability, wherein a first portion of the directed beam is diverted in one direction and a second portion of the directed beam is diverted in a second direction;
 - d. a first image sensor for receiving the first portion of the directed beam; and
 - e. a second image sensor for receiving the second portion of the directed beam.
2. The camera of claim 1, further comprising an image intensifier associated with one of the cameras for intensifying the image under low ambient lighting conditions.
3. The camera of claim 1, wherein the first diverted beam is a high ambient lighting beam and the second diverted beam is a low ambient lighting beam.
4. The camera of claim 1, wherein each image sensor is a digital image device.
5. The camera of claim 1, wherein at least one image sensor is a digital image device.
6. The camera of claim 1, further including a singled data bus for transmitting the data collected and processed by the image sensors and further including selection means for enabling and disabling alternative of the sensors in order to assure only one image sensor is transmitting data on the bus at any time.
7. The camera of claim 6, wherein each image sensor includes an iris and further including a controller for selectively activating and deactivating each iris.

8. The camera of claim 6, wherein each image sensor includes an iris and further including a controller for increasing the dynamic range of each sensor through selective iris control.
9. The camera of claim 7, wherein the iris controller comprises an iris driver and an iris actuator.
10. The camera of claim 8, wherein the iris controller comprises an iris driver and an iris acutator.
11. The camera of claim 1, wherein the first sensor is a color sensor and wherein the second sensor is a monochrome sensor.
12. The camera of claim 11, further including an image intensifier positioned between the mirror and the monochrome sensor.
13. The camera of claim 12, further including a relay lens positioned between the image intensifier and the monochrome sensor.
14. The camera of claim 13, further including an iris controller associated with the relay lens.
15. The camera of claim 14, further including an iris controller associated with the single primary lens.
16. The camera of claim 15, wherein each iris controller comprises an iris driver and an iris actuator.
17. The camera of claim 1, wherein the single primary lens system comprises a plurality of lens component movable relative to one another to permit zoom capability.
18. The camera of claim 6, further including a processor for controlling the scanning of the image of the digital sensor and producing an output signal.

19. The camera of claim 18, further including an angular position management system for detecting and controlling the angular position of the system.
20. The camera of claim 19, the angular position management system comprising a pair of orthogonal gyroscopic accelerometers disposed in a plane parallel to the image plane of the digital sensor for detecting angular accelerations in order to derive the angular position of the system.
21. The camera of claim 1, further including a display device associated with the image sensors for displaying the output therefrom.
22. The camera of claim 21, wherein the display device is a viewfinder.
23. The camera of clam 22, wherein the camera is housed in a single, handheld, portable unit.

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